FACT SHEET

L-1368

CONCRETE FENCE POSTS

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Concrete fence posts are both durable and attractive. Well-made concrete posts last for 40 years or more without significant deterioration and little or no upkeep. They often are used for decorative yard, boundary and farmstead entry fences.

Posts must be adequately sized for the expected use and properly reinforced. Table 1 gives suggested dimensions and reinforcing for various types of posts. Materials required per 100 posts also are given. Figure 1 shows a typical wood mold which may be constructed to cast posts. The base should be constructed with ¾-inch plyform plywood when posts are to be less than 8 feet long. For longer posts, use 1-inch by 6-inch tongue and groove lumber cleated together with two-by-fours 2 feet on centers. For tapered posts, spacer boards need to be tapered and spaced at each end to give the proper taper. Figures 2, 3, 4, 5 and 6 show typical post details.

When many posts are to be cast, it likely will be more economical to construct a metal form or mold. The metal mold should be made of 16-gauge steel (or heavier) for durability and ease of fabrication.

Wood molds require an oil coating on the wood surface before casting the posts to prevent bonding of the concrete to the wood. For a slick surface, the form can be covered with epoxy paint.

REINFORCING

Reinforcing requirements for posts are shown in Table 1. These bars or wires should be spaced at each corner and have a minimum cover of ¾ inch for all but corner and corral posts. At least 1 inch of concrete should cover reinforcing in corner posts and corral posts.

Reinforcing bars or wire should be clean and free of oil or rust and scale. Wires are cut approximately 12 inches shorter than the post and placed to extend within 6 inches of each end of the post. Reinforcing for shorter electric fence posts should extend to within 3 inches of the ends of the post.

CONCRETE

Durable posts require a good quality concrete which has been placed and cured properly. Concrete should be made with quality, well-graded sand, type I portland cement, pea gravel of a maximum aggregate size of ⅜ to ½ inch and clean water. If concrete is ordered from a ready-mix plant, specify a six-sack mix with no more than 5½ gallons of water per sack of cement. This provides a high-strength durable concrete which resists moisture penetration. For those who want to mix their own concrete, use the following mix:

1 sack portland cement
2¼ cubic feet sand
2½ cubic feet gravel
5 gallons of water

For the first batch, mix the cement and water together first. Then slowly add sand and gravel in about equal proportions until the mix is smooth and not soupy. As the sand and gravel are being added, notice the consistency of the mix. If it looks too rocky, increase the sand content slightly. For economy, get as much gravel as you can into the mix but keep enough sand in to provide a smooth finish. After completing the first trial batch, determine how much sand and gravel was used. This tells you what to add for future batches, using the particular sand and gravel you have. If the sand

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is wet, reduce the water you add per sack by about ½ gallon.

When placing the concrete in the form, be sure the reinforcing is kept in place and the concrete is worked thoroughly into the form. Vibrate the form with light hammer blows, or better yet use a rod to work the concrete around the steel and to work out air bubbles. After the water disappears from the surface of the concrete, trowel it lightly to smooth the exposed surface. Do not overwork the surface while it is wet as this brings too much of the fine material to the surface, resulting in later flaking of the surface.

After the concrete hardens, cover it with wet burlap or plastic sheeting to prevent rapid drying. For best results, keep posts moist for at least 4 days before removing from the form. Posts should be carefully stacked and kept wet for another 3 to 5 days before placing them in a fence. **Do not** attempt to cast posts when the outside temperature is 40 degrees or below, unless you can do this in a heated building.

Table 1. Suggested dimensions and reinforcing for various types of concrete posts.

Post use	Size	Diameter	Quantity	Materials per post
General fencing	3½″ X 3½″ X 7′	#6 gauge wires	4	0.6 cu. ft. concrete 24 ft. wire
Corral fences	5½″ X 5½″ X 8′	¼ inch wires	4	1.65 cu. ft. concrete 28 ft. bars
Electric fences	3″ X 3″ X 3′6″	#6 gauge wires	4	0.22 cu. ft. concrete 12 ft. wire
	3″ X 3″ X 5′	#6 gauge wires	4	0.31 cu. ft. concrete 18 ft. wire
Corner posts	7½″ X 7½″ X 8′	½ inch bars	4	3.12 cu. ft. concrete 28 ft. bars
Clothes line	5½″ X 5½″ X 9′	⅜ inch bars	4	1.89 cu. ft. concrete 32 ft. bars

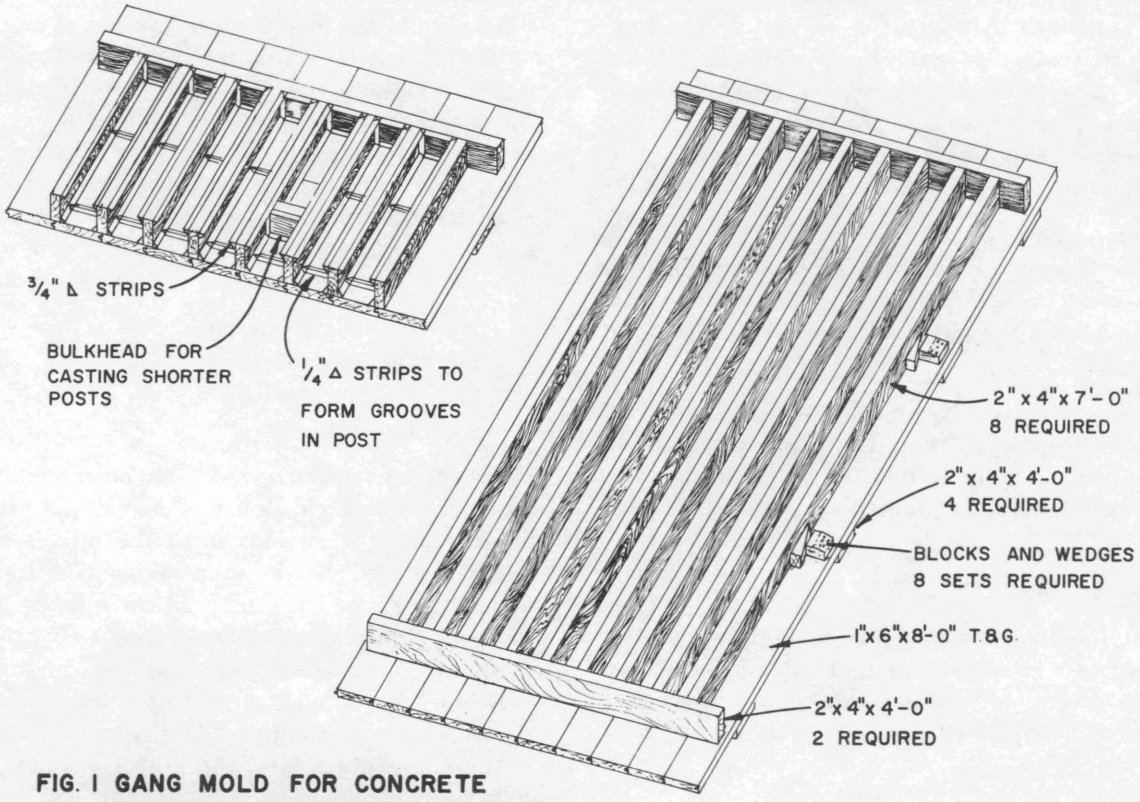


FIG. 1 GANG MOLD FOR CONCRETE FENCE POSTS. A ONE SACK BATCH OF CONCRETE FILLS THE 7-POST MOLD, MAKING 7 OF THE 7-FT. POSTS.

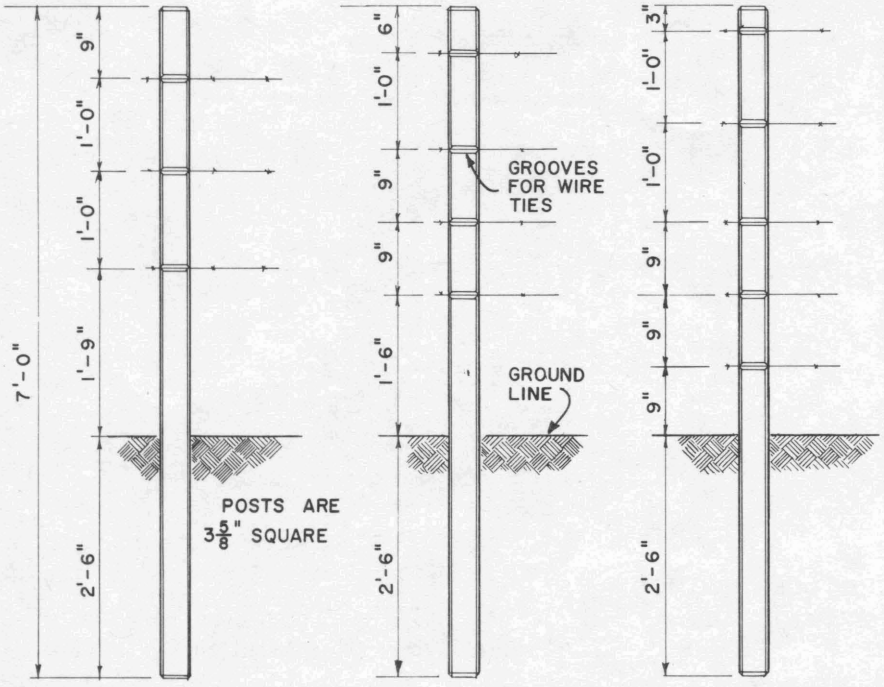


FIG. 2 STANDARD WIRE SPACING FOR BARBED WIRE FENCES

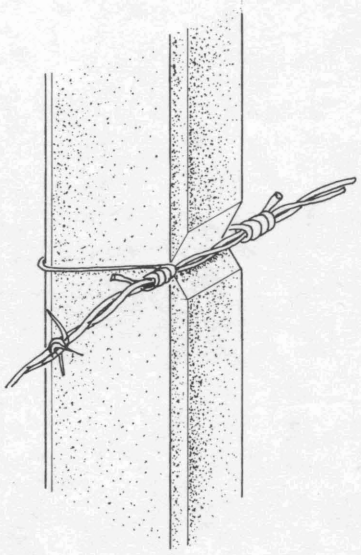


FIG. 3 METHOD OF FASTENING FENCE WIRE IN THE GROOVES IN THE CONCRETE POSTS

PLACE WIRE 3 FT. ABOVE GROUND
OR 3/4 HEIGHT OF ANIMAL

ATTACH WIRES AS SHOWN

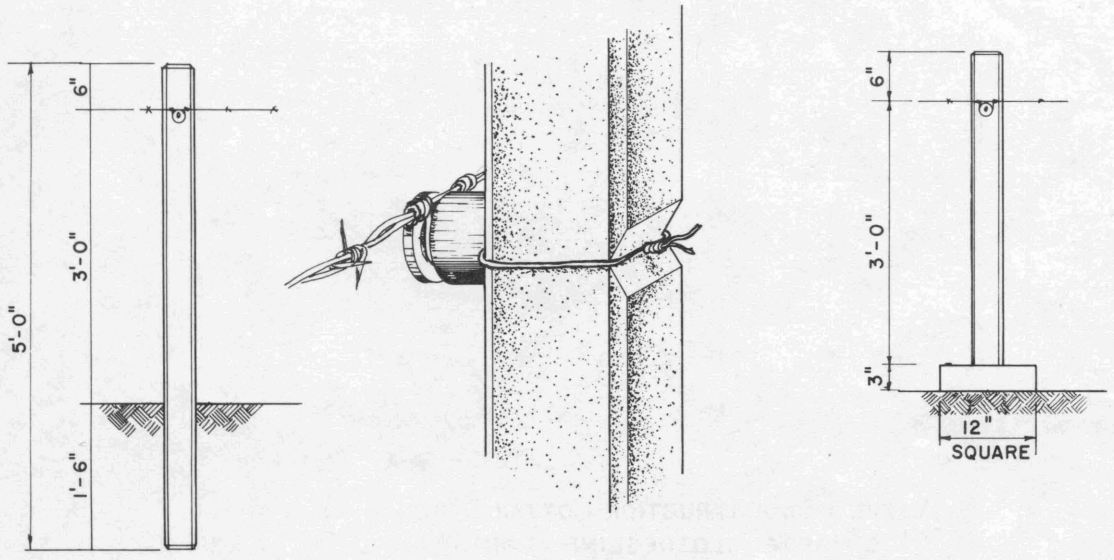
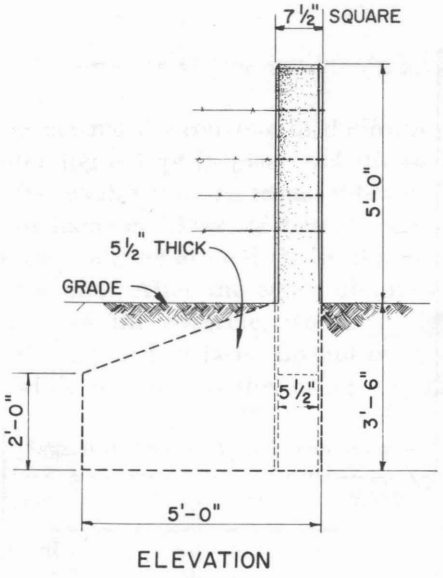


FIG. 4 CONCRETE POSTS FOR ELECTRIC FENCES. ELECTRIC FENCE WIRE SHOULD BE INSULATED FROM POSTS IN THIS MANNER.



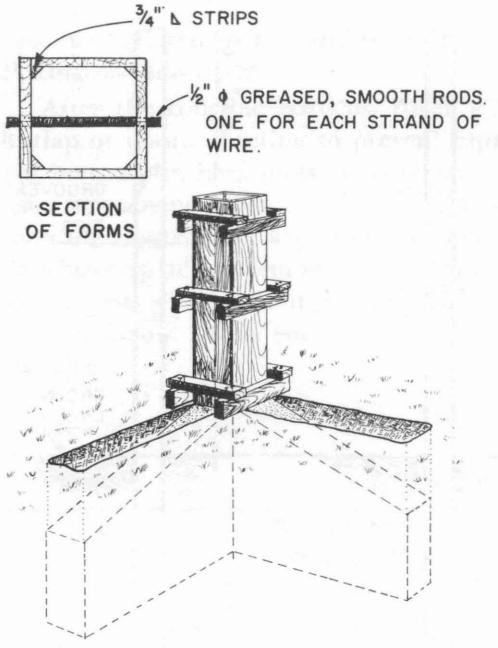


FIG. 5 SUGGESTED FORM CONSTRUCTION FOR CONCRETE CORNER POSTS AND END POSTS.

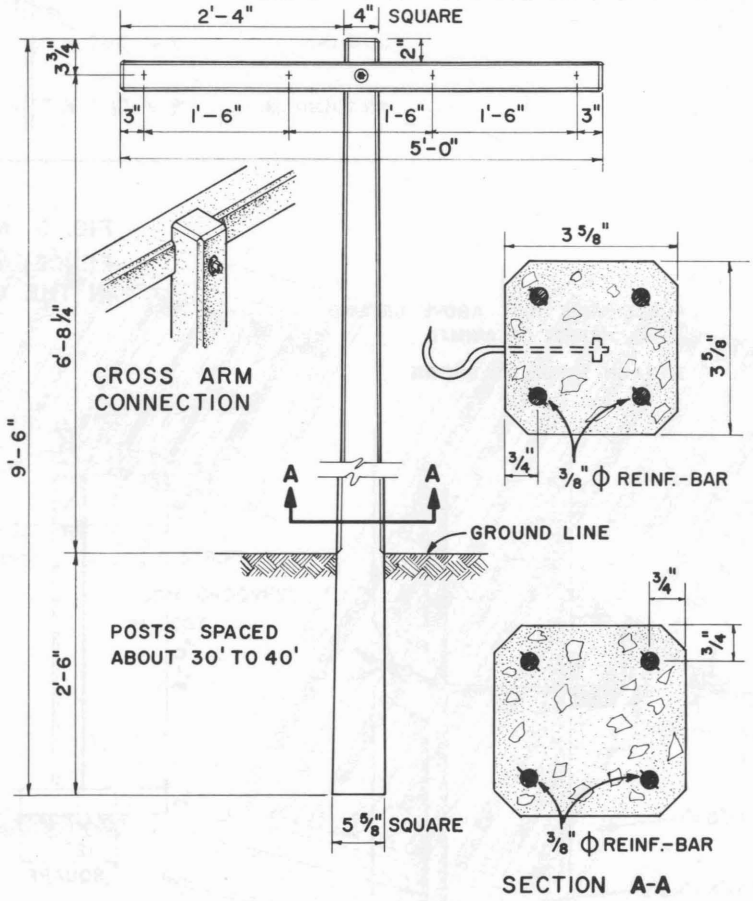


FIG. 6 CONSTRUCTION DETAILS FOR CONCRETE CLOTHESLINE POSTS

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